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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Takuhito Ueno

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EXAMINER

RUDOLPH, VINCENT M

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/975,250	<b>Applicant(s)</b> UENO ET AL.	
	<b>Examiner</b> Vincent Rudolph	<b>Art Unit</b> 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 16-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16, 18-21, 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki ('581) in view of Itoh ('995) and Yang ('335).

Regarding claim 16, Miyazaki ('581) discloses an image forming apparatus (**See Figure 18, Element 1000b**) having a power save mode and a normal mode (energy saving or low power consumption mode and a normal operation mode, **See Col. 6, Line 22-25**) that includes a receiver (I/F unit, **See Figure 18, Element 1113**) configured to receive data from an external device located outside the image forming apparatus (received from the main unit separate from the printer, **See Figure 18; Col. 9, Line 22-24**), an image forming portion (print buffer, **See Figure 18, Element 1116**) configured to output an image corresponding to the received data (stores the received data prior to transferring it to print head, **See Col. 9, Line 25-28**), a controller configured to be in the off-state in the power save mode (power-off in the energy saving mode, **See Col. 9, Line 47-49**) and to control the image forming portion to output the received data after a period of transition from the power save mode to the normal mode (while returning from the energy saving mode to the normal operation mode, **See Col. 9, Line**

**46-55**, a period of transition is needed to supply power back to the printer, **See Col. 10, Line 5-6**).

Miyazaki ('581) does not disclose a communication interface that includes a receiver and is configured to control a speed for receiving the data during the period of transition.

Itoh ('995) discloses a communication interface (**See Figure 1, Element 36**) that includes a receiver (buffer, **See Figure 2, Element 36a**) and is configured to control a speed for receiving the data during the transition period (the data is received either at the normal speed or at a lower speed depending on the capacity of the storage during the operation period of either transmitting or receiving data, **See Col. 6, Line 9-23**).

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to include controlling a speed for receiving data, such as the one disclosed within Ito ('995), and incorporate it into Miyazaki ('581) because it prevents the printer from receiving more data than it is able to store and overload the memory and cause an error as a result.

The combination of Miyazaki ('581) and Itoh ('995) does not disclose that the receiver receives the data during the period of transition.

Yang ('335) discloses a controller (**See Figure 1, Element 120**) that receives data during the period of transition (a power save mode is transitioned to a processing routine once print data is received, **See Figure 4; Col. 6, Line 10-31**).

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to include receiving data during a transition period, such as

the one disclosed by Yang ('335) and incorporate it into Miyazaki ('581) because it allows the printer to save power by verifying that the data has been received in order to transition the printer for processing the data rather than transition the printer for processing prior to receiving the data.

Regarding claim 18, Miyazaki ('581) does not disclose that the communication interface is configured to control the speed for receiving the data based on a predictive time length of the period set in the communication interface.

Itoh ('995) discloses that the data received is controlled based on the setting of the timer (**See Col. 5, Line 19-25**).

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to include a time length for controlling the speed of receiving data, such as the one disclosed within Itoh ('995), and incorporate it into Miyazaki ('581) because it allows a printer to still receive data while completing another task for a designated amount of time without the need to temporarily stop the incoming data.

Regarding claim 19, Miyazaki ('581) discloses a storing portion configured to store the received data (**See Col. 9, Line 22-24**).

Miyazaki ('581) does not disclose that the communication interface is configured to control the speed for receiving data based on a residual capacity of the storing portion.

Itoh ('995) discloses that the data received is controlled based on a predetermined capacity (if the memory falls below a predetermined level, the speed for receiving data is reduced, **See Col. 5, Line 26-34**).

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to include controlling the speed for receiving the data based on the capacity of the memory, such as the one disclosed within Itoh ('995), and incorporate it into Miyazaki ('581) because it allows a printer to still receive data while completing another task without the need to temporarily suspend the incoming data.

Regarding claim 20, Miyazaki ('581) does not disclose controlling the speed for receiving the data based on information indicating a maximum data payload to be received from the external device.

Itoh ('995) discloses controlling the speed for receiving the maximum data payload based on the data sent from the external device (depending on the amount of data sent from the computer, if it overloads the maximum capacity of the memory, the speed to receive the data is reduced, **See Col. 5, Line 65-Col. 6, Line 13**).

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to include controlling the speed for receiving the maximum data payload based on the amount being sent, such as the one disclosed within Itoh ('995), and incorporate it into Miyazaki ('581) because it allows a printer to still receive data from the computer without the need to temporarily suspend the incoming data or resending the data completely because of an error from overloading.

Regarding claim 21, Miyazaki ('581) does not disclose controlling the speed for receiving the data based on a reply rate of an ACK and NAK response to the external device.

Itoh ('995) discloses controlling the data based on a reply rate of an ACK (data is successfully being transferred from the computer) and NAK (error) response (the data being transferred is either accepted or denied from the computer, depending on the capacity of the memory, which reduces the receiving speed of the data if fallen below a predetermined level, **See Col. 5, Line 65-Col. 6, Line 13**).

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to include controlling the speed for receiving the data based on the reply rate response, such as the one disclosed within Itoh ('995), and incorporate it into Miyazaki ('581) because it allows a printer to still receive data from the computer without the need to temporarily suspend the incoming data or resending the data completely because of an error from overloading.

Regarding claim 23, Miyazaki ('581) discloses that the image forming device is coupled to the external device through a serial bus (interface signal line, **See Figure 18, Element 1111; Col. 9, Line 31-33**), and the communication interface is configured to decide a mode shift by detecting change of an input control signal of a parallel interface, the mode shift including a shift from or to the normal mode (a command to shift the printer to normal mode and be ready to print if it is not in the energy saving mode, **See Col. 10, Line 10-17**).

Regarding claim 25, Miyazaki ('561) discloses that the image forming device is coupled to the external device through a serial bus (interface signal line, **See Figure 18, Element 1111; Col. 9, Line 31-33**).

Miyazaki ('561) does not disclose that the communication interface is configured to decide the speed for receiving the data based on a rate of notices informing that reception is normally completed as well as not normally completed, in replying to a receiving response to the external device.

Itoh ('995) discloses the speed for receiving data is based on notices that the reception of data is normally completed as well as not normally completed (whether the data being transferred is either accepted or denied, the computer notices since the transfer of data continues or abruptly stops, depending on the capacity of the memory, which reduces the receiving speed of the data if fallen below a predetermined level, **See Col. 5, Line 65-Col. 6, Line 13**).

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to include controlling the speed for receiving the data based on the notices, such as the one disclosed within Itoh ('995), and incorporate it into Miyazaki ('581) because it allows the computer to know whether the data is either cancelled, or transmitting at a slower rate, and allows the user to make the appropriate modifications if necessary.

Claims 17, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki ('581) in view of Itoh ('995) and Yang ('335) as applied to claim 16, and further in view of Kawase ('130).

Regarding claim 17, Miyazaki ('581) does not disclose having the controller configured to set information in the communication interface for controlling the speed for



receiving the data as well as having the communication interface configured to control the speed for receiving the data based on the information set by the controller.

Itoh ('995) discloses a controller (CPU, **See Figure 1, Element 31**) that sets information in the interface for controlling the speed for receiving the data (**See Col. 5, Line 26-27**), and, as a result, the communication interface is configured to control the speed for receiving the data based on the information set (**See Col. 5, Line 15-19**).

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to including setting information for controlling a speed for receiving data, such as the one disclosed within Ito ('995), and incorporate it into Miyazaki ('581) because it allows to set the printer for receiving a certain amount of data and well as specify the speed for receiving the data in order to prevent overloading of the memory.

The combination of Miyazaki ('581) and Itoh ('995) fail to disclose setting the information before going into an off-state.

Kawase ('130) discloses setting information prior to going into an off-state (setting the power-save mode, **See Col. 13, Line 35-45**, before going into an off-state of the power saving mode, **See Col. 14, Line 15-30**).

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to include setting the information before going into an off-state, such as the one disclosed within Kawase ('130), and incorporate it into the controller of Itoh ('995) used within Miyazaki ('581) because it allows different speeds

(modes) to be set before powering down so that optimum power conservation as well as data communication speed is able to occur.

Regarding claim 22, Miyazaki ('581) discloses that the image forming device is coupled to the external device through a serial bus (interface signal line, **See Figure 18, Element 1111; Col. 9, Line 31-33**).

Miyazaki ('581) does not disclose that the communication interface is configured to decide whether or not the data including a packet is directed to the image forming apparatus, by referring to an address area in the packet, and to respond to the data being addressed to the image forming apparatus whenever the information is transmitted from the external device.

Kawase ('130) discloses transmitting data that includes packets to an image forming apparatus (**See Figure 1, Element 121; Col. 11, Line 18-30**).

The combination does not *expressly* disclose an address area in the packet is referred to in order to determine that the image forming apparatus is in fact the destination.

However, **official notice** is taken that at the time of the invention, it was known that there was a header section within a packet that references an address of a network destination where the packet was intended to be transmitted.

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to include packets whenever transmitting data, such as the one disclosed within Kawase ('130), and incorporate it into Miyazaki ('581) because it is able to provide data using a fast communication for multiple devices so that the devices

know the location of the data being sent as well as be able to respond to commands over the network.

Regarding claim 24, Miyazaki ('581) discloses that the image forming device is coupled to the external device through a serial bus (interface signal line, **See Figure 18, Element 1111; Col. 9, Line 31-33**).

Miyazaki ('581) does not disclose that the communication interface is configured to decide the speed for receiving the data based on a setting of a data payload in a packet from the external device.

Itoh ('995) discloses controlling the speed for receiving the maximum data payload based on the data sent from the external device (depending on the amount of data sent from the computer, if it overloads the maximum capacity of the memory, the speed to receive the data is reduced, **See Col. 5, Line 65-Col. 6, Line 13**).

Kawase ('130) discloses transmitting data that includes packets to an image forming apparatus (**See Figure 1, Element 121; Col. 11, Line 18-30**).

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to include controlling the speed for receiving the maximum data payload that includes packets based on the amount being whenever transmitting data, such as the one disclosed within Kawase ('130) and Itoh ('995), and incorporate it into Miyazaki ('581) because it is able to provide data using a fast communication for multiple devices without the need to temporarily suspend the incoming data or resend the data completely because of an error from overloading.

### ***Response to Arguments***

Applicant's arguments with respect to the amended claims have been considered but are moot in view of the new grounds of rejection. Thus, the prior art of Yang is used in combination with Miyazaki and Itoh and together do meet the limitations of the amended claims as disclosed within the rejection above.

Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent Rudolph whose telephone number is (571) 272-8243. The examiner can normally be reached on Monday through Friday 8 A.M. - 4:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on (571) 272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner  
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